

Application No. 10/612,649  
Reply dated: June 6, 2006  
Reply to Non-Final Office Action of March 23, 2006

### REMARKS

In response to the Office Action dated March 23, 2006, Applicants respectfully request reconsideration based on the above claim amendment and the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 1-7 and 14-18 are pending in the present Application as Claims 8-13 and 19-23 have been previously withdrawn and Claim 20 previously cancelled without prejudice, leaving Claims 1-7 and 14-18 for consideration upon entry of the present amendment and following remarks.

Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

#### Claim Rejections Under 35 U.S.C. §103

In order for an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). See MPEP 2143.

#### Claims 1-3, 5, 7, 14, 15 and 17

Claims 1-3, 5, 7, 14, 15 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's Prior Art (Figs. 1-4) (hereinafter "APA") in view of Kubota et al., U.S. Patent No 6,771,334 (hereinafter "Kubota"). Applicants respectfully traverse.

In the Office Action at Pages 3 and 5, it is stated that regarding independent Claims 1 and 14, that APA discloses an orientation film 15 coated on an upper surface of the pixel electrode 14 having an orientation groove rubbed in a first direction 15a towards the second region (opening

Application No. 10/612,649  
Reply dated: June 6, 2006  
Reply to Non-Final Office Action of March 23, 2006

window) 14c (page 4, lines 13-22 of the Specification). It is further stated that APA does not show the second region including a *second boundary* where the *second boundary* is a remaining boundary of the second region except for the first boundary. In the Office Action, it is alleged that Kubota discloses a reflective electrode 3a disposed on a first region (reflective display region) and a transmissive electrode 3a disposed on a second region (transmissive display region) without being covered by the reflective electrode 3a, wherein the second boundary is a boundary between the first and second regions and the second boundary is a remaining boundary of the second region except for the first boundary of Claims 1 and 14.

Claims 1 and 14 recited, *inter alia*, that

"an orientation film coated on an upper surface of the pixel electrode and having an orientation groove rubbed in a first direction *toward the second boundary*."

APA does not disclose "the second boundary" of the claimed invention, as conceded in the Office Action. Claims 1 and 14 include the orientation film with an orientation groove in a first direction toward the second boundary, not the second region. Contrary to the rejection details in the Office Action, since APA does not disclose the second boundary of the claimed invention, APA necessarily does not disclose an orientation film coated on an upper surface of the pixel electrode and having an orientation groove rubbed in a first direction toward the second boundary of Claims 1 and 14.

Kubota discloses pixel electrodes disposed such that distances to a substrate of a reflective electrode and a transmissive electrode are different and liquid molecules at a surface facing the reflective and transmissive electrodes, respectively, are aligned in the same direction in a same plane being parallel to surfaces of the substrate. (Abstract) Alignment films 7a and 7b are provided with *each a different treatment* and alignment film 8 is provided with *a uniform treatment*, the combination of the alignment films 7 and 8 and the varying distance between the reflective 3a and transmissive 3b electrodes and the common electrode 6 disposing the liquid crystal molecules 4a (above the reflective electrode 3a) and the liquid crystal molecules 4b (above the transmissive electrode 3b) to be aligned in a same direction in a plane parallel to the substrate. (Col. 8, lines 23-64 and Figures 1-3.) Applicants find no disclosure in Kubota of an orientation groove or anything relating to rubbing directions relative to the pixel electrode 3, the alignment films 7,8, the substrates or any other feature of Kubota. Therefore, Kubota also does

Application No. 10/612,649  
Reply dated: June 6, 2006  
Reply to Non-Final Office Action of March 23, 2006

not disclose an orientation film coated on an upper surface of the pixel electrode and having an orientation groove rubbed in a first direction toward the second boundary of Claims 1 and 14.

Thus, as discussed above, APA and Kubota *fail to teach or suggest all of the limitations* of Claims 1 and 14. Thus, *prima facie* obviousness does not exist regarding Claims 1 and 14 with respect to APA and Kubota.

Applicants further submit that there exists no motivation to modify or combine APA with Kubota to teach the claimed invention.

APA does not provide a suggestion or motivation of the pixel electrode and the orientation groove relative to a first *and a second boundary* defined by the reflective and transparent electrodes as claimed.

For the purpose of this response, even if Kubota were considered as teaching a first and second boundary of Claims 1 and 14, the alignment of the liquid crystal is disclosed without any regard to boundaries between the reflective and transmissive electrodes, let alone impurity and its position (eg. stacked) at a specific boundary of the reflective and/or transparent electrodes. In fact, Kubota only considers alignment of liquid crystal in regions above the reflective and transmissive electrodes to be in the same direction in a same plane as a function of multiple alignment films having different treatments, and a distance between the reflective and transmissive electrodes and a substrate. Given this structure, Kubota does not disclose an orientation groove and a rubbing direction of the alignment films relative to any boundaries, let alone a second boundary, as discussed above.

If APA were modified or combined with Kubota, the reflective electrode 14b and the transmissive electrode 14a of APA would be at different distances from the common electrode 23, alignment films *of different treatments* would be disposed over the reflective electrode 14b, the transmissive electrode 14a and the common electrode 23 and liquid crystal over the reflective electrode 14b and the transmissive electrode 14a would merely be aligned in the same direction in a same plane parallel to surfaces of the substrate.

That is, there is no suggestion or motivation to modify or combine APA with Kubota, to define first and second boundaries of the reflective and the transmissive electrode, and an orientation groove and a rubbing direction relative to first and second boundaries as claimed.

Application No. 10/612,649  
Reply dated: June 6, 2006  
Reply to Non-Final Office Action of March 23, 2006

Therefore, APA and Kubota, coupled with knowledge generally available in the art at the time of the invention, do not contain suggestion or incentive that would have motivated the skilled artisan to modify or combine APA and Kubota.

Since the relied-upon references *fail to teach or suggest all of the limitations* of Claims 1 and 14 and that there lacks evidence to show that knowledge generally available to one of ordinary skill in art would lead that individual to combine APA and Kubota to disclose the claimed invention, clearly, one of ordinary skill at the time of Applicants' invention would not have a *motivation to modify or combine the references*, nor a reasonable likelihood of success in forming the claimed invention by the Examiner's modifying or combining the references. Thus, here again, *prima facie* obviousness is unfounded. *Id.*

Thus, the requirements of *prima facie* obviousness are not met by the Examiner's 35 U.S.C. 103(a) rejection of at least Claims 1 and 14. Applicants respectfully submit that Claims 1 and 14 are not further rejected or objected and are therefore allowable. Claims 2, 3, 5, 7, 15 and 17 variously depend from Claims 1 and 14, are not further rejected or objected and are correspondingly allowable as depending upon allowable Claims 1 and 14. Reconsideration, withdrawal of the relevant claim rejections and allowance of Claims 1-3, 5, 7, 14, 15 and 17 are respectfully requested.

Claims 4, 6, 16 and 18

Claims 4, 6, 16 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over APA in view of '344 and further in view of Kubo et al., U.S. Patent No. 6,452,654 (hereinafter Kubo). Applicants respectfully traverse.

Claims 4, 6, 16 and 18 depend from and inherit all of the limitations of Claims 1 and 14. As discussed above, Claims 1 and 14 are allowable over APA and Kubo. Kubo is relied upon as teaching the sidewall of the reflective electrode is inclined to prevent the impurity from being stacked at the boundary. Kubo does not disclose the first and second boundaries, an orientation groove and a rubbing direction relative to the first and second boundaries of the claimed invention, and does not remedy the deficiencies of APA and Kubota. Therefore, APA, Kubota and Kubo, alone or in combination, fail to teach or suggest all of the limitations of Claims 4, 6, 16 and 18, as inheriting all the limitations of Claims 1 and 14.

Application No. 10/612,649  
Reply dated: June 6, 2006  
Reply to Non-Final Office Action of March 23, 2006

Thus, the requirements of *prima facie* obviousness are not met by the Examiner's 35 U.S.C. 103(a) rejection of Claims 4, 6, 16 and 18. Applicants respectfully submit that Claims 4, 6, 16 and 18 are not further rejected or objected and are therefore allowable. Reconsideration, withdrawal of the relevant claim rejections and allowance of Claims 4, 6, 16 and 18 are respectfully requested.

**Conclusion**

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued.

If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,

CANTOR COLBURN LLP

By:

Amy Bizon-Copp

Amy Bizon-Copp  
Reg. No. 53,993  
CANTOR COLBURN LLP  
55 Griffin Road South  
Bloomfield, CT 06002  
Telephone (860) 286-2929  
Facsimile (860) 286-0115  
Customer No. 23413

Date: June 6, 2006